

# SEQUENCE LISTING

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<120> T-m Leveling Methods

<130> 17682A-003630US

<140> US 10/032,307  
<141> 2001-12-21

<150> US 09/054,830  
<151> 1998-04-03

<150> US 09/054,832  
<151> 1998-04-03

<150> US 09/431,385  
<151> 1999-11-01

<150> US 60/186,046  
<151> 2000-03-01

<150> US 09/640,953  
<151> 2000-08-16

<150> US 09/724,959  
<151> 2000-11-28

<150> US 09/796,988  
<151> 2001-02-28

<160> 90

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<223> Description of Artificial Sequence:minor groove  
binder (MGB)-modified FAM probe

<220>  
<221> modified\_base  
<222> (1)  
<223> n = c modified by FAM

<220>  
 <221> modified\_base  
 <222> (18)  
 <223> n = t modified by a quencher (Q) and minor groove binder (MGB)

<400> 1  
 nttttgacct aacaaatn 18

<210> 2  
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<220>  
 <223> Description of Artificial Sequence:minor groove binder (MGB)-modified FAM probe complement

<400> 2  
 atggttaattt gttaggtcaa aagaaaaatc tttaga 36

<210> 3  
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<220>  
 <223> Description of Artificial Sequence:4-amino-3-(prop-1-ynyl)pyrazolo[3,4-d]pyrimidine (PPPA) analog of adenosine and pyrazolo[3,4-d]pyrimidine analog of guanosine (PPG) containing minor groove binder (MGB)-modified FAM probe

<400> 3  
 tacaattaaa caatccagtt ttcttttttag aaatct 36

<210> 4  
 <211> 15  
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<220>  
 <223> Description of Artificial Sequence:4-amino-3-(prop-1-ynyl)pyrazolo[3,4-d]pyrimidine (PPPA) analog of adenosine and pyrazolo[3,4-d]pyrimidine guanosine (PPG) containing minor groove binder (MGB)-modified FAM probe complement

<220>  
 <221> modified\_base  
 <222> (1)  
 <223> n = pyrazolo[3,4-d]pyrimidine analog of guanosine modified by FAM

<220>  
 <221> modified\_base  
 <222> (5)..(6)  
 <223> n = pyrazolo[3,4-d]pyrimidine analog of guanosine

<220>  
<221> modified\_base  
<222> (9)..(11)  
<223> n =  
4-amino-3-(prop-1-ynyl)pyrazolo[3,4-d]pyrimidine  
analog of adenosine

<220>  
<221> modified\_base  
<222> (15)  
<223> n = a modified by a quencher (Q) and minor groove  
binder (MGB)

<400> 4  
nttanntcnn nagan

15

<210> 5  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:TM-Invader  
probe substituted with six  
pyrazolo[3,4-d]pyrimidine analogs of guanosine

<220>  
<221> modified\_base  
<222> (2)..(7)  
<223> n = pyrazolo[3,4-d]pyrimidine analog of guanosine

<400> 5  
tnnnnnncct tggcggctac g

21

<210> 6  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:TM-Invader  
probe substituted with one  
pyrazolo[3,4-d]pyrimidine analog of guanosine

<220>  
<221> modified\_base  
<222> (5)  
<223> n = pyrazolo[3,4-d]pyrimidine analog of guanosine

<400> 6  
tgggnggcct tggcggctac g

21

<210> 7  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:TM-Invader  
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<400> 7  
 tggggggcct tggcggctac g 21

<210> 8  
 <211> 10  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:complementary  
 target 1

<400> 8  
 tcggcggcgt 10

<210> 9  
 <211> 10  
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<220>  
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 target 2

<400> 9  
 acagcggcgt 10

<210> 10  
 <211> 10  
 <212> DNA  
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<220>  
 <223> Description of Artificial Sequence:complementary  
 target 3

<400> 10  
 acagcgacgt 10

<210> 11  
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 <212> DNA  
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<220>  
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 target 4

<400> 11  
 tcagtgcga 10

<210> 12	
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tcagtgacaa	10
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tcaatgacag	10
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<211> 10	
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acaatgataa	10
<210> 15	
<211> 10	
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<223> Description of Artificial Sequence:complementary target 8	
<400> 15	
ccaataataa	10
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<211> 10	
<212> DNA	
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<p>&lt;220&gt; &lt;223&gt; Description of Artificial Sequence:probe sequence 1</p>	
<p>&lt;400&gt; 17 aaagttatgt ctacttacag aaa</p>	23
<p>&lt;210&gt; 18 &lt;211&gt; 23 &lt;212&gt; DNA &lt;213&gt; Artificial Sequence</p>	
<p>&lt;220&gt; &lt;223&gt; Description of Artificial Sequence:probe sequence 2</p>	
<p>&lt;400&gt; 18 aaagctatgt ctacttacag aaa</p>	23
<p>&lt;210&gt; 19 &lt;211&gt; 23 &lt;212&gt; DNA &lt;213&gt; Artificial Sequence</p>	
<p>&lt;220&gt; &lt;223&gt; Description of Artificial Sequence:probe sequence 3</p>	
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<p>&lt;210&gt; 20 &lt;211&gt; 23 &lt;212&gt; DNA &lt;213&gt; Artificial Sequence</p>	
<p>&lt;220&gt; &lt;223&gt; Description of Artificial Sequence:probe sequence 4</p>	
<p>&lt;400&gt; 20 aaagttgtgt ctacttacag aaa</p>	23
<p>&lt;210&gt; 21 &lt;211&gt; 23 &lt;212&gt; DNA &lt;213&gt; Artificial Sequence</p>	

<220>  
 <223> Description of Artificial Sequence:probe sequence  
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<400> 21  
 aaagttacgt ctacttacag aaa 23

<210> 22  
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 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:probe sequence  
 6

<400> 22  
 aaagttatat ctacttacag aaa 23

<210> 23  
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 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:probe sequence  
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<400> 23  
 aaagttatgc ctacttacag aaa 23

<210> 24  
 <211> 23  
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 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:probe sequence  
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<400> 24  
 aaagttatgt ttacttacag aaa 23

<210> 25  
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<220>  
 <223> Description of Artificial Sequence:probe sequence  
 9

<400> 25  
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<210> 26  
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 aaagttatgt ctacctacag aaa 23  
  
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 aaagttatgt ctactcacag aaa 23  
  
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       14



<400> 30  
aaagttatgt ctacttgcag aaa 23

<210> 31  
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<220>  
<223> Description of Artificial Sequence:target sequence  
1

<400> 31  
gtaagtagac ataac 15

<210> 32  
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<220>  
<223> Description of Artificial Sequence:target sequence  
2

<220>  
<221> modified\_base  
<222> (1)..(15)  
<223> n = 4-amino-3-(prop-1-ynyl)pyrazolo[3,4-d]pyrimidine  
analog of adenosine

<400> 32  
gtnngtngnc ntnnc 15

<210> 33  
<211> 15  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:target sequence  
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<220>  
<221> modified\_base  
<222> (15)  
<223> n = c modified by minor groove binder (MGB)

<400> 33  
gtaagtagac ataan 15

<210> 34  
<211> 15  
<212> DNA  
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<220>  
 <223> Description of Artificial Sequence:target sequence  
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 <221> modified\_base  
 <222> (1)..(14)  
 <223> n = 4-amino-3-(prop-1-ynyl)pyrazolo[3,4-d]pyrimidine  
 analog of adenosine

<220>  
 <221> modified\_base  
 <222> (15)  
 <223> n = c modified by minor groove binder (MGB)

<400> 34  
 gttnngtngnc nttnnn 15

<210> 35  
 <211> 10  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:duplex  
 complement match

<400> 35  
 agctgtgact 10

<210> 36  
 <211> 10  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:duplex  
 complement 1

<400> 36  
 agctgtgact 10

<210> 37  
 <211> 10  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:duplex  
 complement 2

<400> 37  
 agcgggtgact 10

<210> 38  
 <211> 10  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence:duplex  
         complement 3  
  
 <400> 38  
 agccgtgact 10  
  
 <210> 39  
 <211> 10  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence:duplex  
         complement 4  
  
 <400> 39  
 agcagagact 10  
  
 <210> 40  
 <211> 10  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence:duplex  
         complement 5  
  
 <400> 40  
 agcagggact 10  
  
 <210> 41  
 <211> 10  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence:duplex  
         complement 6  
  
 <400> 41  
 agcagcgact 10  
  
 <210> 42  
 <211> 10  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence:duplex  
         complement 7

<400> 42  
agcaatgact 10

<210> 43  
<211> 10  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence:duplex  
complement 8

<400> 43  
agcattgact 10

<210> 44  
<211> 10  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:duplex  
complement 9

<400> 44  
agcactgact 10

<210> 45  
<211> 10  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence:duplex  
complement match

<400> 45  
aataataacc 10

<210> 46  
<211> 10  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:duplex  
complement 10

<400> 46  
aattataacc 10

<210> 47  
<211> 10  
<212> DNA  
<213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:duplex  
         complement 11  
  
 <400> 47  
 aatgataacc 10  
  
 <210> 48  
 <211> 10  
 <212> DNA  
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 <220>  
 <223> Description of Artificial Sequence:duplex  
         complement 12  
  
 <400> 48  
 aatcataacc 10  
  
 <210> 49  
 <211> 10  
 <212> DNA  
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         complement 13  
  
 <400> 49  
 aataaaaacc 10  
  
 <210> 50  
 <211> 10  
 <212> DNA  
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         complement 14  
  
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 aataagaacc 10  
  
 <210> 51  
 <211> 10  
 <212> DNA  
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 <223> Description of Artificial Sequence:duplex  
         complement 15  
  
 <400> 51  
 aataacaacc 10

<210> 52  
 <211> 15  
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           extension template  
  
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 aaccactctg tccta 15  
  
 <210> 53  
 <211> 17  
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 ctgtaagtag atataac 17  
  
 <210> 54  
 <211> 14  
 <212> DNA  
 <213> Artificial Sequence  
  
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 <223> Description of Artificial Sequence:probe sequence  
  
 <400> 54  
 ggcaagatat atag 14  
  
 <210> 55  
 <211> 14  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence:probe sequence  
  
 <400> 55  
 gtgacgcaga ttcc 14  
  
 <210> 56  
 <211> 15  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence:probe sequence  
  
 <400> 56  
 gtaagtagac ataac 15

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<210> 57
<211> 14
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:probe sequence

<400> 57
cagggagctt tgga
14

<210> 58
<211> 14
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:probe sequence

<400> 58
cactcgtgaa gctg
14

<210> 59
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:probe sequence

<400> 59
gtaagtaggc ataac
15

<210> 60
<211> 14
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:probe sequence

<400> 60
ccggatgtag gatc
14

<210> 61
<211> 14
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:probe sequence

<400> 61
gattacctgg attt
14

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<210> 62  
<211> 14  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:probe sequence

<400> 62  
ccgtcaatgg tcac 14

<210> 63  
<211> 12  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:probe sequence

<400> 63  
cagcacgtag cc 12

<210> 64  
<211> 14  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:probe sequence

<400> 64  
cggctacgtg ctgg 14

<210> 65  
<211> 14  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:probe sequence

<400> 65  
cggctacatg ctgg 14

<210> 66  
<211> 12  
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<220>  
<223> Description of Artificial Sequence:probe sequence

<400> 66  
ctaaatctgc cg 12



<210> 67  
 <211> 15  
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 <213> Artificial Sequence  
  
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 <400> 67  
 tctggatgat gggca 15

<210> 68  
 <211> 15  
 <212> DNA  
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 gttcatgggt gtaat 15

<210> 69  
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 <400> 69  
 cggaggtagg atca 14

<210> 70  
 <211> 13  
 <212> DNA  
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 <223> Description of Artificial Sequence:probe sequence  
  
 <400> 70  
 ccacccgcct cag 13

<210> 71  
 <211> 15  
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 cacaggagtg gttgg 15

<210> 72  
 <211> 14  
 <212> DNA  
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 cggaccagtg cgtg 14

<210> 73  
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 tcggaccagt gcgt 14

<210> 74  
 <211> 14  
 <212> DNA  
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 aacggggtac gata 14

<210> 75  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
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 cagttgagat tctaagac 18

<210> 76  
 <211> 12  
 <212> DNA  
 <213> Artificial Sequence  
  
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 <400> 76  
 aggggcgtct tg 12

<210> 77  
 <211> 15  
 <212> DNA  
 <213> Artificial Sequence  
  
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 <400> 77  
 gtaagtaggc atagc 15  
  
 <210> 78  
 <211> 13  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence:probe sequence  
  
 <400> 78  
 tgcccagccc cag 13  
  
 <210> 79  
 <211> 14  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence:probe sequence  
  
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 ccaacactcg tgaa 14  
  
 <210> 80  
 <211> 15  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence:probe sequence  
  
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 gtaagtagac acagc 15  
  
 <210> 81  
 <211> 12  
 <212> DNA  
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 tcggaccagt gc 12

<210> 82  
 <211> 13  
 <212> DNA  
 <213> Artificial Sequence  
  
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 cgatcacgct ggc 13

<210> 83  
 <211> 13  
 <212> DNA  
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 gtcctggggg tgg 13

<210> 84  
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 <213> Artificial Sequence  
  
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 gtaagtaggt gtgac 15

<210> 85  
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 <220>  
 <223> Description of Artificial Sequence:probe sequence  
  
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 ggttgtacgg gttcacg 17

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 ggaccagtgc gtga 14

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 <223> Description of Artificial Sequence:probe sequence  
  
 <400> 87  
 gtaagtagac gcagc 15

<210> 88  
 <211> 15  
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 <223> Description of Artificial Sequence:probe sequence  
  
 <400> 88  
 gtaagtaggc gcagc 15

<210> 89  
 <211> 15  
 <212> DNA  
 <213> Artificial Sequence  
  
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 <223> Description of Artificial Sequence:probe sequence  
  
 <400> 89  
 gtaagtaggc gcggc 15

<210> 90  
 <211> 12  
 <212> DNA  
 <213> Artificial Sequence  
  
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 <223> Description of Artificial Sequence:probe sequence  
  
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 gggtcccgag cg 12